



## NASA-Rio Disaster Preparedness Cooperative Effort



In Dec. 2015, NASA and the City of Rio de Janeiro signed an agreement to support innovative efforts to better understand, anticipate, and monitor hazards, including heavy rainfall, sea level rise, and landslides, in and around the city. This collaboration will leverage the unique attributes of NASA's satellite data and Rio de Janeiro's management and monitoring capabilities to improve awareness of how the city of Rio may be impacted by hazards and affected by climate change.

NASA's Earth-observing satellites provide valuable information to diagnose how our environment and climate is around the world. The City of Rio de Janeiro collects important data from the ground to connect with what can be viewed from space for improving the monitoring of hazards and climate impacts, making decisions, and taking action.

This collaboration will focus on integrating, visualizing, and sharing relevant data, as well as providing detailed information about the hazards and how they are being studied with the general public. NASA seeks to develop a scientific understanding of Earth's water and energy systems and how they respond to natural or human-induced changes in order to improve prediction of climate, weather, and natural hazards. NASA is able to use satellites and airborne instruments to better understand our home planet, improve lives, and increase our safety. NASA freely shares both the knowledge and the data with institutions around the world.

The Mayor's Office in Rio de Janeiro oversees several research and operational agencies that play a role in natural hazard mitigation, climate change impact assessment, and response. The Instituto Perieira Passos is the statistical and cartographic research arm of the municipal government that handles Rio's statistical data. The Center de Operacoes integrates over 30 agencies to anticipate, reduce, and respond immediately to threats such as flooding and fires. The Fundacao Geo-Rio serves as a geological research organization with extensive expertise in landslides among many other areas. Working together, these agencies have a comprehensive set of tools and resources that enable the city to respond to natural and human-induced disasters, plan for climate change impacts, and monitor the environment.

To see the full press release, please go to  
<http://www.nasa.gov/feature/goddard/2016/nasa-to-aid-disaster-preparedness-in-rio-de-janeiro>

As a part of this collaboration, NASA and the mayor's office in Rio will sponsor a series of webinars for students, teachers, and the general public in the Rio area. Participants will learn about the science behind many facets of change that are taking place in the Rio area; including climate change, extreme precipitation, fires, air and water quality, and sea-level rise. They will learn about how NASA satellite data has been used and can be applied to understand changes within the greater Rio area. NASA scientists, Rio scientists, government officials from the Mayor's office, and educators from Rio will all assist with these events.

The webinars will be in Portuguese, and will be held on **Sept. 21<sup>st</sup>**, **Oct. 19<sup>th</sup>**, and **Nov. 16<sup>th</sup>** at 6:30 pm (Rio time). These will be recorded and made available online.

You can learn more at this website-

[http://science.gsfc.nasa.gov/610/applied-sciences/nasa\\_rio\\_partnership.html](http://science.gsfc.nasa.gov/610/applied-sciences/nasa_rio_partnership.html)



*Natural-color imagery collected by Landsat satellites show how Barra da Tijuca and the West Zone have changed since the 1980s. The upper image was acquired by the Thematic Mapper on Landsat 5 on September 19, 1984; the lower image was acquired by the Operational Land Imager on Landsat 8 on September 25, 2015. Forested areas are green; urbanized areas are gray.*